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| APPLICATION NO.                           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/811,115                                | 03/26/2004  | Cheng-Hung Ho        | 250908-1250         | 9230             |
| 24504                                     | 7590        | 07/03/2007           |                     |                  |
| THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP |             |                      | EXAMINER            |                  |
| 100 GALLERIA PARKWAY, NW                  |             |                      | YOUNG, NICOLE M     |                  |
| STE 1750                                  |             |                      | ART UNIT            | PAPER NUMBER     |
| ATLANTA, GA 30339-5948                    |             |                      | 2139                |                  |
|   |             |                      |                     |                  |
|   |             |                      | MAIL DATE           | DELIVERY MODE    |
|   |             |                      | 07/03/2007          | PAPER            |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                             |                     |
|------------------------------|-----------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b>      | <b>Applicant(s)</b> |
|                              | 10/811,115                  | HO ET AL.           |
|                              | Examiner<br>Nicole M. Young | Art Unit<br>2139    |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 26 March 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 March 2007 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim language states "compression/encryption". The Applicant must write separate claims for each.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorrell et al. (US 2003/0123701) hereinafter Dorrell and further in view of Weller (US 2005/0055464).**

**Claims 1 and 11 disclose an image protection system and method (Dorrell Figure 1 discloses an image protection system and method), comprising: an image compression/encryption device, comprising:**

Dorell does not teach a compression unit to separate an image into base image

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data and auxiliary image data (the Examiner interprets the auxiliary image data to be the metadata of Dorrell and the header of Weller both are equivalent) according to a compression technique, and compress the base image data to compressed base image data according to the compression technique, but Weller discloses, but Weller teaches separately compressing the header in paragraph [0008]. It would be obvious to a person skilled in the art at the time of invention to separately compress the header because as in paragraph [0008] it is favorable to the speed of the performance.

Dorrell paragraph [0058] teaches the compression of the image data and associated metadata;

an encryption unit coupled to the compression unit to receive and encrypt the auxiliary image data to an auxiliary image data cipher; and (Doller paragraph [0061] teaches encrypting the compressed image data and associated metadata).

an image composing unit coupled to the compression unit and the encryption unit to receive and compose the compressed base image data and the auxiliary image data cipher into a protected image corresponding to the image (Doller paragraph [0061] and [0064] teaches encrypting the compressed image data and associated metadata and paragraph [0062] teaches that the result is written to a file and stored in the memory).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2-10 and 12-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dorrell et al. (US 2003/0123701)** hereinafter Dorrell and Weller (US 2005/0055464) and in further view of **Fukushima (US 6,917,384)**.

**Claims 2 and 12** disclose the system and method of claims 1 and 11 further comprising: an image recovery device, comprising:

an image decomposition unit to receive and decompose the protected image into the compressed base image data and the auxiliary image data cipher ;

a decryption unit coupled to the image decomposition unit to receive and decrypt the auxiliary image data cipher to the auxiliary image data using a decryption key (Dorrell paragraph [0089] teaches decrypting the metadata and image data); and

Dorrell does not teach but Fukushima teaches, a decompression unit coupled to the image decomposition

unit and the decryption unit to receive the compressed base image data and the auxiliary image data, decompress the compressed base image data to the base image data, and combine the base image data and the

auxiliary image data to recover the image according to the compression technique in column 6 lines 53-60 teach decompression. It would be obvious to one of ordinary skill in the art at the time of invention to decompress the data to retrieve the original data that was compressed above.

**Claims 3 and 13** disclose the system and method of claims 2 and 12 wherein the image compression/encryption device further comprises a transformation unit to perform discrete wavelet transformation on the image in advance (Fukushima column 14 lines 22-30).

**Claims 4 and 14** disclose the system and method of claims 3 and 13 wherein the image recovery device further comprises an anti-transformation unit to perform anti-discrete wavelet transformation on the image after the image is combined (Fukushima column 10 lines 20-39).

**Claims 5 and 15** disclose the system and method of claims 4 and 14 wherein the image compression/encryption device further comprises a quantization unit to quantize each coefficient of the image after the discrete wavelet transformation (Fukushima column 8 lines 24-27).

**Claims 6 and 16** disclose the system and method of claim 5 and 15 wherein the image recovery device further comprises an anti-quantization unit to anti-quantize each coefficient of the image before the anti-discrete wavelet transformation (Fukushima column 9 lines 49-57).

**Claims 7 and 17** disclose the system and method of claims 1 and 11 wherein the

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compression technique is region of interest (ROI) compression (Fukushima column 1 lines 58-62).

**Claims 8 and 18** disclose the system and method of claims 1 and 11 wherein the compression technique is resolution compression (Fukushima column 7 lines 40-49 wherein the resolution is reduced to ½ it's size).

**Claims 9 and 19** disclose the system and method of claims 1 and 11 wherein the compression technique is quality compression (Fukushima column 7 lines 40-49, resolution compression is quality compression).

Claims 10 and 20 disclose the system and method of claims 1 and 11 wherein the compression unit further compresses the auxiliary image data (Dorrell paragraph 58 teaches subsequent compressions).

**Note:** Examiner has pointed out particular references contained in the prior arts of record and in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable to the limitations of the claims. It is respectfully requested from the applicant, in preparing for response, to consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the Examiner.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole M. Young whose telephone number is 571-270-1382. The examiner can normally be reached on Monday through Friday, alt Fri off, 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NMY  
6/21/2007

*Taghi Arani*  
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PRIMARY EXAMINER  
*6/25/07*